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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------|---------------------|------------------|
| 10/735,158  | 12/12/2003  | Donald P. Satchell JR. | M03A225             | 3498             |
| 7590  | 05/31/2006  |                        | EXAMINER            |                  |
| Ira Lee Zebrak<br>The BOC Group, Inc.<br>Legal Services - Intellectual Property<br>100 Mountain Ave.<br>Murray Hill, NJ 07974 |             |                        | LANGEL, WAYNE A     |                  |
|   |             |                        | ART UNIT            | PAPER NUMBER     |
|   |             |                        | 1754                |                  |
| DATE MAILED: 05/31/2006   |             |                        |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                 |                         |
|------------------------------|---------------------------------|-------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>          | <b>Applicant(s)</b>     |
|                              | 10/735,158                      | SATCHELL, DONALD P.     |
|                              | <b>Examiner</b><br>Wayne Langel | <b>Art Unit</b><br>1754 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1-24 is/are allowed.
- 6) Claim(s) 25 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. ____ .   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-12-03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____ .                                   |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 25 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jack et al. No distinction is seen between the apparatus disclosed by Jack et al, and that recited in claim 25, since the apparatus of Jack et al would have the capability of providing different energy environments to reaction vessels 11, 25 and 51. Whether different energy levels would be so provided would depend on how much power the operator would use to operate the agitator blades.

Claim 25 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Satchell, Jr. et al '874. No distinction is seen between the apparatus disclosed by Satchell, Jr. et al '874, and that recited in claim 25, since the apparatus of Satchell, Jr. et al '874 would have the capability of providing different energy environments to the various reactors. Whether different energy levels would be so provided would depend on how much power the operator would use to operate the agitator blades.

The Drawing is objected to under 37 CFR 1.84(u)(1) in referring to the sole figure as "Figure 1".

The specification is objected to under 37 CFR 1.84(u)(1) in referring to the sole Drawing figure as "Figure 1".

Claims 1-24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: US 5,637,285 (Coronell et al) discloses that simultaneously increasing the hydrogen fluoride content of the ammonium acid fluoride melt and increasing the mixing intensity increases the  $F_2$  - to-  $NF_3$  ratio. However there is no teaching, disclosure or suggestion in Coronell et al to employ to employ a relatively low energy environment in a first reaction zone and a relatively high energy environment in a second reaction zone, as required by applicant's claims. Nor would there be any motivation from the prior art to do so. Applicant's specification discloses the disadvantages of the process of Coronell et al on page 3, lines 6-22, and further discloses the advantages of the claimed process in the paragragh bridging pages 13 and 14.

US 6,986,874 (Satchell, Jr. et al '874) discloses a method for producing nitrogen trifluoride by contacting a fluorine-containing feed srstream with liquid ammonium acid fluoride in a series of reactors, wherein each successive reactor contains liquid ammonium acid fluoride having a lower bulk melt acidity value than that of the immediately preceding reactor. However there is no teaching, disclosure or suggestion in Satchell, Jr. et al '874 to employ to employ a relatively low energy environment in a first reaction zone and a relatively high energy

environment in a second reaction zone, as required by applicant's claims. Nor would there be any motivation from the prior art to do so. Applicant's specification discloses the disadvantages of the process of Satchell, Jr et al '874 in the first full paragragh on page 4 (US/2002/0127167 is the equivalent of Satchell, Jr. et al '874), and further discloses the advantages of the claimed process in the paragraph bridging pages 13 and 14.

The other references are made of record for disclosing various methods for producing nitrogen trifluoride by reacting fluorine with liquid ammonium acid fluoride.

Any inquiry concerning this communication should be directed to Wayne Langel at telephone number 571-272-1353.



Wayne A. Langel  
Primary Examiner  
Art Unit 1754